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09/505,735	02/16/2000	Alessandro Muti	MFCP.68276	6053

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EXAMINER

AVELLINO, JOSEPH E

ART UNIT

PAPER NUMBER

2143

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	09/505,735 	MUTI ET AL.
	Examiner Joseph E. Avellino	Art Unit 2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 09 July 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 and 12-31 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 and 12-31 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

1. Claims 1-10, and 12-31 are presented for examination.

Allowable Subject Matter

2. The Examiner reiterates that the features found in the specification as discussed in the interview (i.e. updating the threshold sizes when the file size transferred is above a predefined threshold limit, in conjunction with how the utilization is obtained, as described at page 14, line 15 to page 15, line 3) would overcome the Rakavy in view of Garg rejection outlined below however would not overcome the rejections under 35 USC 101 outlined below.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-10, and 12-31 are rejected under 35 U.S.C. 101 because they are not statutory.

4. As has been outlined in the Interim Guidelines, now part of MPEP 2106. A claim is statutory if it produces a "useful, concrete, and tangible result" State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. As such exemplary claim 1 provides the determination that *if* the actual level is lower than the threshold level, then transferring a portion of data over the network. However, since this result is a conditional limitation, it

does not necessarily have to occur. Therefore, if the actual level is *greater* than the threshold level, then no data transfer occurs. As such, in this situation of the claim, the result is the mere determination of the actual level being greater than the threshold level, which is not a tangible, nor a useful result.

5. Referring to claim 31, this claim follows the same line of reasoning as for exemplary claim 1. The claim merely determines whether or not to suspend or resume the data transfer, which, again is not a tangible, or useful result.

6. All claims not expressly discussed above are rejected for similar reasons as stated above.

7. Claim 22 is further rejected under 35 USC 101 because it is a data structure on a computer-readable medium. This data structure merely stores values and contains non-function descriptive material and is therefore non-statutory.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-9, 14-27, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy et al. (USPN 5,913,040) (hereinafter Rakavy) in view of Garg et al. (USPN 6,327,677) (Hereinafter Garg).

8. Referring to claim 1, Rakavy discloses a method of transferring a set of data over a network between a local device and a remote device comprising:

monitoring the level of bandwidth utilization of the local computing device (col.

14, lines 8-9);

calculating a threshold level of utilization as a function of the monitored level of utilization of the local computing device (col. 13, line 66 to col. 14, line 7); and

if the actual level is less than the threshold level, transferring at least a portion of the set of data over the network between the local computing device and the remote computing device (col. 14, lines 16-21).

Rakavy does not disclose identifying a maximum monitored level of actual utilization and that the threshold level of utilization is calculated as a function of the maximum monitored level of utilization. In analogous art, Garg discloses another method of transferring data over a network comprising the steps of:

identifying a maximum monitored level of actual utilization (i.e.

PeakHistoricalUtilization) (col. 12, lines 15-20); and

calculating a threshold level of as a function of the maximum monitored level of utilization (i.e. determine if the network utilization has exceeded the peak historical utilization * 1.25) (col. 12, lines 15-44).

monitoring the level of actual network bandwidth utilization of a computer device (an inherent feature, otherwise there would be no way to determine if the transmission of the data would cause the connection data to exceed the maximum threshold value) (col. 4, line 1; col. 12); and

if the actual level is less than the threshold level, receiving a portion over the network (i.e. if the network utilization is below the threshold set, then an alarm would not be triggered) (col. 12);

It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Rakavy with Garg, in order to provide an efficient method by utilizing historical values in conjunction with current monitored levels in order to detect problems or potential problems with the device as supported by Garg (col. 2, lines 33-36). This detection can be utilized by Rakavy in order to determine whether or not to reduce or cease data transfer, resulting in an efficient system which utilizes previous historical values in conjunction with current monitored levels, thereby allowing the determination to be realized by what is going on with the device, rather than a static value.

9. Referring to claim 2, Rakavy discloses the client receives the data over the network from a server (col. 5, lines 32-39).

10. Referring to claim 3, Rakavy discloses said monitoring occurs at the interface between the client and the network (col. 14, lines 8-15).

11. Referring to claim 4, Rakavy discloses the network is the Internet (col. 5, lines 8-9).

12. Referring to claim 5, Rakavy discloses the threshold level is equal to a predetermined percentage of the maximum monitored level (col. 13, lines 35-44).
13. Referring to claim 6, Rakavy discloses the set of data includes a software update (col. 3, lines 60-62; col. 15, lines 22-27).
14. Referring to claim 7, Rakavy discloses repeating at least said monitoring step each time a portion of the set of data is received (Figure 6, reference character 43 and related parts of the disclosure).
15. Referring to claim 8, Rakavy discloses separately receiving a plurality of discrete portions of the set of data over the network when the actual level is less than the threshold level (col. 14, lines 32-60).
16. Referring to claim 9, Rakavy discloses a method of transferring a set of data over a network as stated in the claims above. Rakavy does not disclose incrementing a counter each time a discrete portion of the data is received over the network. "Official Notice" is taken that both the concept and advantages of providing for incrementing a counter each time a portion of data is received is well known and expected in the art. It would have been obvious to one of ordinary skill in the art to provide incrementing a counter each time a portion of data is received to the combined system of Rakavy and Riggan to keep an accurate track of the number of packets received for this data set.

17. Referring to claim 14, Rakavy discloses suspending the receipt of discrete portions of the data if the level of actual utilization becomes greater than the threshold level (col. 14, lines 16-21).

18. Referring to claim 15, Rakavy discloses resuming the receipt of discrete portions of the data from the point of suspension when the level of actual utilization becomes less than the threshold level (col. 13, lines 23-34).

19. Referring to claim 16, Rakavy discloses a method of transferring a set of data over a network as stated in the claims above. Rakavy further discloses repeating said monitoring step each time a portion of the set of data is received (Figure 6, reference character 43 and related parts of the disclosure). Rakavy does not disclose identifying a maximum level of utilization during receipt of the set of data and calculating a threshold level of utilization for the set of data as a function of the maximum level of utilization identified during receipt of the set of data. In analogous art, Garg discloses another method of transferring data over a network comprising the steps of:

identifying a maximum monitored level of actual utilization (i.e. peak historical bandwidth) (col. 12, lines 15-20); and

calculating a threshold level of utilization (i.e. peak historical utilization * 1.25) as a function of the maximum monitored level of utilization (col. 12);

monitoring the level of actual network bandwidth utilization (an inherent feature, otherwise there would be no way to determine if the transmission of the data would cause the connection data to exceed the maximum threshold value) (col. 2, lines 60-65; col. 8, lines 30-47); and

if the actual level is less than the threshold level, receiving a portion over the network (i.e. the system would raise an alarm, which could tell the background downloader to cease downloading) (col. 8, lines 30-47).

It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Rakavy with Garg, in order to provide an efficient method by utilizing historical values in conjunction with current monitored levels in order to detect problems or potential problems with the device as supported by Garg (col. 2, lines 33-36). This detection can be utilized by Rakavy in order to determine whether or not to reduce or cease data transfer, resulting in an efficient system which utilizes previous historical values in conjunction with current monitored levels, thereby allowing the determination to be realized by what is going on with the device, rather than a static value.

20. Referring to claim 17, Rakavy discloses a method of transferring a set of data over a network as stated in the claims above. Rakavy does not disclose estimating the maximum level of utilization during receipt of the set of data by calculating an average level of utilization for the set of data upon repeating said monitoring step a predetermined number of times during receipt of the set of data. In analogous art Garg

discloses determining a maximum level of utilization by calculating an actual level of utilization for a previous time period (i.e. peak historical utilization monitored) (col. 12, lines 20-25). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Rakavy with Garg, since Rakavy discloses numerous methods of calculating line utilization and methods of determining if the data may be downloaded in the background (col. 13, lines 5-10; col. 13, line 66 to col. 14, line 7). This would motivate one of ordinary skill in the art to search for other methods of bandwidth utilization determining, eventually finding the system of Garg, which compares recent network utilization with historical network operation as supported by Garg (col. 2, lines 33-36).

21. Referring to claim 18, Rakavy discloses receiving at least a portion of the set of data over the network if the actual level is less than the threshold level for the set of data (Figure 6).

22. Referring to claim 19, Rakavy discloses receiving at least a portion of a second set of data over the network if the actual level is less than the threshold level for the set of data (col. 14, lines 32-60).

23. Referring to claim 20, it is inherent that the combined system of Rakavy and Garg has a computer-readable medium having computer executable instructions because it instructs the computer in the steps to complete the method.

24. Referring to claim 21, Rakavy discloses a computer system having a memory, an operating system and a central processor being able to execute the instructions stored on the computer-readable medium (col. 4, lines 46-67).

25. Referring to claims 29 and 30, Rakavy discloses the client machine receives the data over the network without substantially interfering with any other network activity (Rakavy discloses downloading the advertisements in a background mode over a communications link, which, as it is well known in the art, is designed to substantially reduce interference with other network activities that is user-oriented) (e.g. abstract).

26. Claims 22-27, and 29-31 are rejected for similar reasons as stated above. Furthermore Rakavy in view of Garg discloses monitoring a changing rate of the amount of data communicated through a device (Garg, levels change from historical values to current monitored values: col. 6, lines 55-65);

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy in view of Garg as applied to claims 1 and 7-9 above, and further in view of Watanabe et al. (USPN 6,285,662) (hereinafter Watanabe).

27. Referring to claim 10, Rakavy in view of Garg disclose a method of transferring a set of data over a network as stated in the claims above. Rakavy in view of Garg do not

disclose the size of the discrete portions of the data is a function of the value of the counter. Watanabe discloses the size of the discrete portions of the data (contention window) is a function of the value of the counter (retransmission attempts) (col. 4, lines 59-63). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Watanabe with the system of Rakavy and Garg for improved throughput rates and power consumption performance of the sending station as disclosed in Watanabe (col. 1, lines 19-21).

28. Referring to claim 11, Rakavy in view of Garg disclose a method of transferring a set of data over a network as stated in the claims above. Rakavy in view of Garg do not disclose increasing the size of the discrete portions of the data when the value of the counter is greater than a predetermined value. Watanabe discloses increasing the size of the discrete portions of the data (contention window) when the value of the counter (retransmission attempts) is greater than a predetermined value (col. 5, lines 2-7). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Watanabe with the system of Rakavy and Garg for improved throughput rates and power consumption performance of the sending station as disclosed in Watanabe (col. 1, lines 19-21).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy in view of Garg as applied to claims 1 and 7-9 above, and further in view of Elzur (USPN 6,427,169).

29. Rakavy in view of Garg disclose a method of transferring a set of data over a network as stated in the claims above. Rakavy in view of Garg do not disclose clearing the counter after receiving all of the plurality of discrete portions of the data over the network. Elzur discloses clearing the counter after receiving all of the plurality of discrete portions of the data over the network (col.9, lines 29-31). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Elzur with Rakavy and Garg to efficiently monitor the number of packets received for the data flow while minimizing the amount of memory space used.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy in view of Garg as applied to claims 1 and 7-9 above, and further in view of Kalkunte et al. (USPN 6,078,591) (hereinafter Kalkunte).

30. Rakavy in view of Garg disclose a method of transferring a set of data over a network as stated in the claims above. Rakavy in view of Garg do not disclose clearing the counter if the level of actual utilization becomes greater than the threshold level. Kalkunte discloses clearing the counter if the level of actual utilization becomes greater than the threshold level (col. 8, line 59 to col. 9, line 7). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Kalkunte with Rakavy and Garg to efficiently monitor the bandwidth utilization of the system and to transfer packets of data according to the monitored bandwidth.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buch et al. (USPN 6,463,468) (hereinafter Buch) in view of Rakavy in view of Garg.

31. Buch discloses a method of communicating between a client process and a server process over a network, the method comprising:

- a. issuing to the server process a first download request which identifies a file and which request that the server process download a first segment of the file over the network (col. 12, lines 25-30);
- b. downloading, by the server process, the first segment of the file (col. 12, lines 32-34);
- c. issuing to the server process a further download request which is associated with the file and which requests that the server process download a further segment of the file over the network, provided the actual network bandwidth utilization is less than a threshold level (col. 12, lines 25-50);
- d. downloading, by the server process, the further segment of the file (col. 12, lines 39-42; Figure 11);
- e. repeating steps (c) and (d) until the server process has downloaded each segment of the file over the network (col. 12, lines 35-50).

Buch does not disclose that the threshold level is calculated as a function of a maximum monitored level of actual network bandwidth utilization. Rakavy in view of Garg disclose calculating a threshold level as a function of a maximum monitored level

of actual network bandwidth utilization (see above rejections). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Buch with Rakavy and Garg to streamline the system, increasing the efficiency by allowing "in-use" periods but low utilization to be harnessed to download files, resulting in increased throughput and less overhead.

Response to Arguments

32. Applicants arguments dated March, 6, 2007 have been fully considered but they are not persuasive.

33. In the remarks, Applicant argues, in substance, that (1) there is no motivation to combine Rakavy with Garg, (2) Garg does not disclose identifying a maximum monitored level, and calculating a threshold level of utilization of a network device since Rakavy is dealing with a background data transfer and Garg is concerned with network monitoring, (3) the claims are statutory under 35 USC 101 since the claim must be taken as a whole.

34. As to point (1), the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir.

1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Rakavy with Garg, in order to provide an efficient method by utilizing historical values in conjunction with current monitored levels in order to detect problems or potential problems with the device as supported by Garg (col. 2, lines 33-36). This detection can be utilized by Rakavy in order to determine whether or not to reduce or cease data transfer, resulting in an efficient system which utilizes previous historical values in conjunction with current monitored levels, thereby allowing the determination to be realized by what is going on with the device, rather than a static value. By this rationale, the rejection is maintained

35. As to point (2), Applicant is incorrect. The Rakavy reference provides the groundwork for the claim with the exception of utilizing a maximum monitored level, rather uses the line utilization as the determination of whether to send data. Garg, on the other hand, discusses the use of monitoring the Peak bandwidth utilization in order to detect problems (which, when taken in context of Rakavy, would prohibit the transfer of data). Applicant also insinuates that since Garg is not dealing with a background data transfer, then it would not be obvious to combine it with Rakavy, however a reference to be used as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. Garg is pertinent to Applicant's problem since it deals with bandwidth utilization management of a network

as well as the communication links and components of the network (Garg: col. 4, lines 44-64). This clearly demonstrates that Garg is considered analogous art with respect to Applicant's invention and therefore the rejection is maintained.

36. As to point (3) Applicant is incorrect. A broad interpretation of the method is that the data transfer is only done when the peak is below the threshold. Since this is a conditional limitation, the method limitation does not always occur. As such an embodiment of the claim results in no concrete, tangible, or useful result. The mere determination of a peak historical value does not constitute a tangible, nor useful result. Although the claim does recite a step of monitoring the bandwidth, this is not the result of the claim, rather is an intermediate step in the process. As such the claim lacks a concrete, tangible, and useful result. By this rationale, the rejection is maintained.

37. Applicant's other arguments are believed to be refuted by points (1)-(3) above.

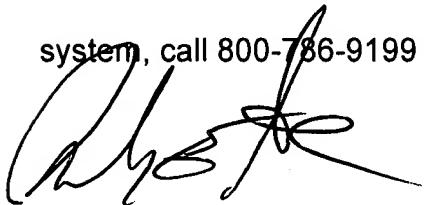
Conclusion

38. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Joseph E. Avellino, Examiner
July 11, 2007